

REMARKS/ARGUMENTS

Claim 18 remains cancelled.

Claims 1-17 and 19-20 remain pending, with Claims 15-17 and 19-20 accorded “withdrawn” status.

Because the claims have not been amended, no new matter has been added.

Applicants thank Examiner Finn for the helpful and courteous interview of February 4, 2009, wherein the arguments presented in this paper were deemed to be persuasive, and wherein Examiner Finn encouraged the submission of this paper as a response to the Official Action.

Applicants respectfully traverse the enablement rejection of Claims 1-14, because the elected species, (2Z)-(1-ethyl-1,3dihydro-2H-benzimidazol-2-ylidene)(5-methyl-{[3-(2-oxopyrrolidin-1-yl)propyl]amino}pyrimidin-4-yl)acetonitrile, is clearly enabled and described by the specification, as filed.

At page 3 of the Official Action, the Office describes “Applicants has not disclosed their invention such that one [of] skill in the art would be able to make or use the invention as claimed. Applicant has shown how to make the composition in example 4, however, they do not start with a compound that is well known in the art or commercially available, even in example 1, it is unclear how one of ordinary skill in the art at the time of the invention would be able to make the starting material, and thus the elected species” (underlining emphasis added).

At the outset, the Office has admitted in the record, that “Applicant has shown how to make the composition in example 4.” Applicants submit this meets the definition of enablement. MPEP 2164, in discussing enablement, describes, in part, “The information contained in the disclosure of an application must be sufficient to inform those skilled in the relevant art how to both make and use the claimed invention.” Surely, making and

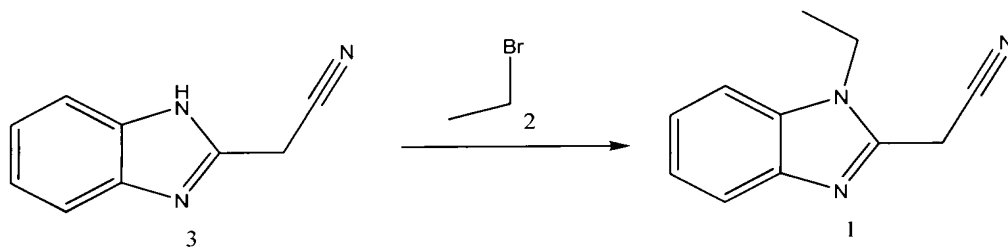
characterizing the elected species informs one of ordinary skill in the art how to make the species. Withdrawal of the enablement rejection is requested on this basis alone.

Continuing with the analysis, MPEP 2164.01, concerning enablement, describes “The standard for determining whether the specification meets the enablement requirement was cast in the Supreme Court decision of Mineral Separation v. Hyde, 242 U.S. 261, 270 (1916) which postured the question: is the experimentation needed to practice the invention undue or unreasonable?”

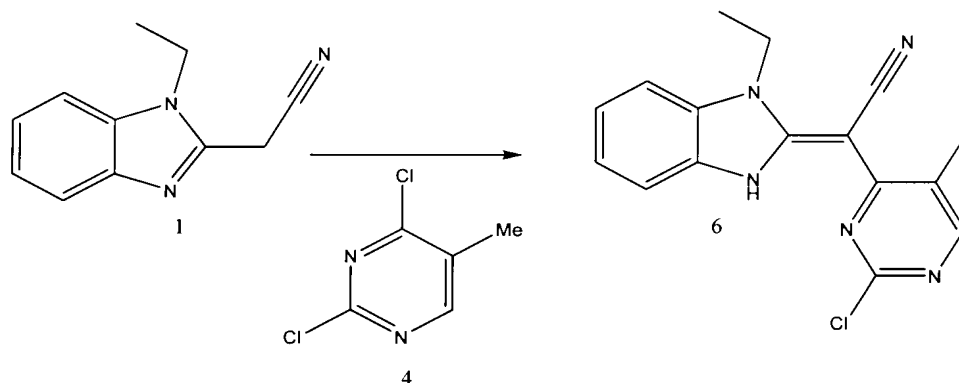
Thus, the question, for purposes of enablement, is could one of ordinary skill in the art make and use the invention without undue experimentation. Or, as described by MPEP 2164.01 “See also United States v. Teletronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988) (“The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation.”).”

Applicants note that the entire synthesis of the elected species is described in the originally filed specification, including the reaction conditions employed, the reagents and reactants utilized, and the isolated intermediates in the synthesis.

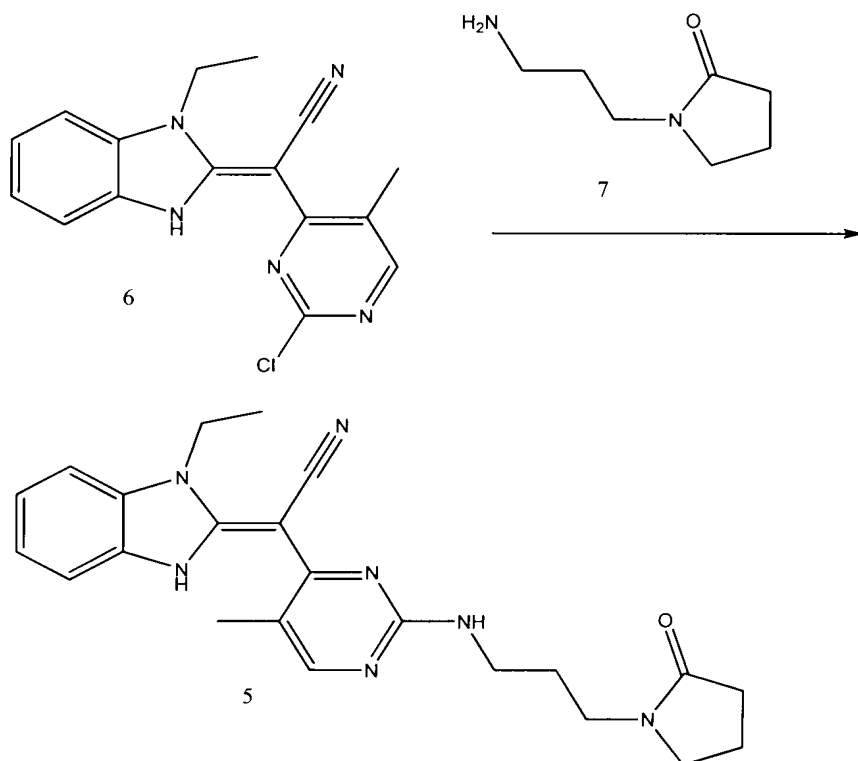
Thus, at pages 40-41 of the originally filed specification, 2-benzimidazolylacetonitrile **3** is reacted in dichloromethane with bromoethane **2** to produce intermediate **1**, as shown below:



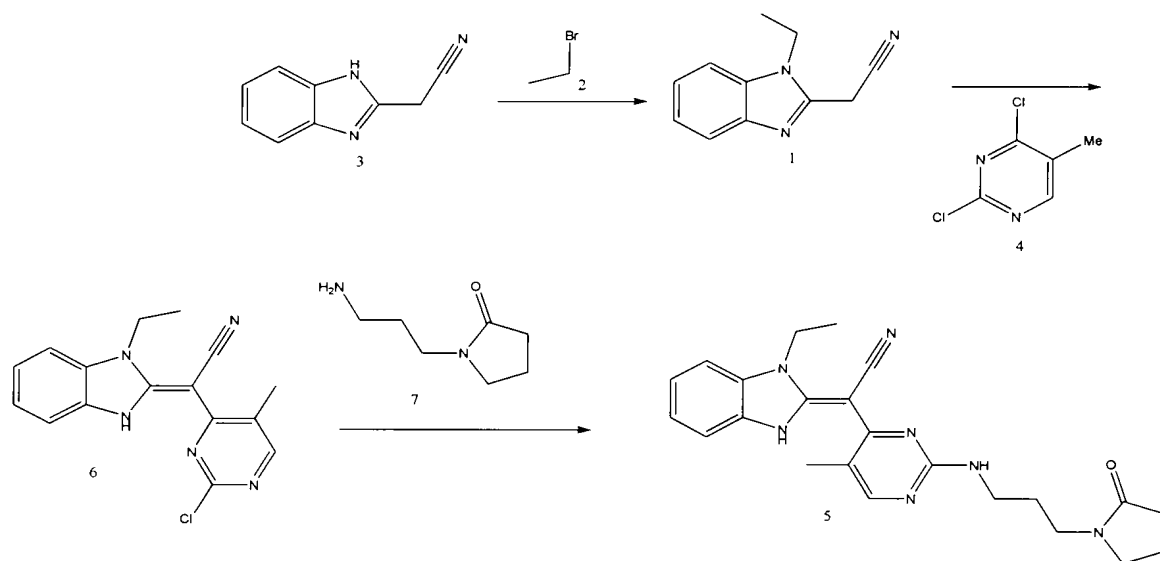
Next, the intermediate **1**, as described for example at pages 42-43 of the originally filed specification, is reacted, for example, in dioxane, with dichloropyrimidine **4**, under reflux, to produce intermediate **6**.



Finally, as described, for example, at page 52 of the originally filed specification, intermediate **6** is reacted with aminopyrrolidinone **7** to form the elected species **5**.



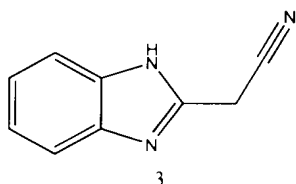
Thus, the synthesis of the elected species **5**, with all reaction steps, as described in the originally filed specification, is



Applicants note the synthesis of complex organic molecule and elected species **5** is thus elegantly accomplished in three (3) synthetic steps from starting material **3**.

However, the Office has argued, at page 3 of the Official Action, that the “Applicant does not start with a compound that is well known in the art or commercially available....it is unclear how one of ordinary skill in the art at the time of the invention would be able to make the starting material, and thus the elected species.”

Starting material **3** is a simple organic molecule.



The Office has admitted, in its In Re Wands analysis, at page 4 of the Official Action, that “The relative skill of those in the art is high.” While Applicants have taken no position on the level of one of ordinary skill in the art, the Examiner’s identification of a person of ordinary skill in the art as “high” would be able to make and use starting material **3** without

undue experimentation because starting material **3** is a simple organic molecule and making the simple organic molecule starting material **3** would not require undue experimentation. On this basis alone, the enablement requirement is satisfied. Withdrawal of the enablement rejection is requested on this basis alone.

Happily, however, in contrast to the Office's assertions, starting material **3** was known before the effective filing date of the present application. Applicants note the present application claims priority to International Application PCT/EP04/52137, filed on September 10, 2004. Thus, the effective filing date of the present application is September 10, 2004.

Applicants have submitted, along with this paper, a printout from the CAS REGISTRY database and a printout from the STN database. Both databases are maintained by the American Chemical Society. In the first printout, the starting material **3**, listed under various chemical names (e.g., 2-(Cyanomethyl)benzimidazole), is listed as having been entered into the STN database on November 16, 1984. Applicants note, in contrast to the Office's assertions, that the November 16, 1984 entry date of this molecule into the STN database clearly proves the molecule was known before the present application effective filing date of September 10, 2004. The STN entry notes, for example, that Bielstein contains numerically searchable property data. Property data can for a compound can only be acquired after a compound is made, so starting material **3** was known in 1984.

Additionally, Applicants have submitted, along with this paper, a five (5) page STN search result. Applicants note, among other things, that the fifth article abstracted, published in 1972, describes "the reaction of benzimidazole-2-acetonitrile..." which is the starting material **3**. Applicants further note that the 1972 publication date of the article is over thirty (30) years before the effective filing date of the present application, proving the starting

material 3, in contrast to the Office's assertion, was known in the art before the effective filing date of the present application.

Accordingly, the Office has made an unsustainable enablement rejection. The specification, as filed, clearly shows how to make the elected species from a starting material that was known at, and well before, the effective filing date of the present application. Further, even if the starting material 3 was not known as of the effective filing date of the present application, starting material 3 is a small, simple organic molecule. One of ordinary skill in the art would be expected to be able to make and use the simple organic molecule starting material 3 without undue experimentation, which meets the standard for enablement.

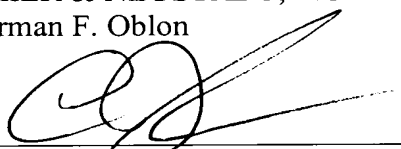
The enablement rejection must be withdrawn.

Applicants submit the present application is now in condition for allowance.

Early notification to this effect is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Norman F. Oblon



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(OSMMN 08/07)

=> s 4414-88-4/rn  
L2 1 4414-88-4/RN

FILE 'CAPLUS' ENTERED AT 11:14:47 ON 16 DEC 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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=> l2  
L3 420 L2

=> l3 and py<2004  
24013033 PY<2004  
L4 324 L3 AND PY<2004

=> l4 not patent/dt  
6477557 PATENT/DT  
L7 232 L4 NOT PATENT/DT  
  
L9 155 L7 AND ENGLISH/LA

=> l9 and united()states/cs  
62528 UNITED  
39897 STATES/CS  
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L10 0 L9 AND UNITED(W)STATES/CS

=> l9 and united()states/so  
62528 UNITED  
566211 STATES/SO  
0 UNITED(W)STATES/SO  
L12 0 L9 AND UNITED(W)STATES/SO

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1256586 UK/CS  
L15 5 L9 AND UK/CS

L15 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2008:1383654 CAPLUS  
TITLE: The Vilsmeier reaction of fully conjugated carbocycles  
and heterocycles  
AUTHOR(S): Jones, Gurnos; Stanforth, Stephen P.  
CORPORATE SOURCE: University Keele, Keele, \*\*\*UK\*\*\*  
SOURCE: Organic Reactions (Hoboken, NJ, United States) (  
\*\*\*1997\*\*\* ), 49, No pp. given  
CODEN: ORHNBA

URL: <http://www3.interscience.wiley.com/cgi-bin/mrwhome/107610747/HOME>

PUBLISHER: John Wiley & Sons, Inc.  
DOCUMENT TYPE: Journal; General Review; (online computer file)  
LANGUAGE: \*\*\*English\*\*\*  
AB A review of the article The Vilsmeier reaction of fully conjugated carbocycles and heterocycles.

L15 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:831799 CAPLUS  
DOCUMENT NUMBER: 134:102208  
TITLE: Studies of fluorescent dyes: part 2. An investigation of the synthesis and electronic spectral properties of substituted 3-(2'-benzimidazolyl)coumarins  
AUTHOR(S): Christie, Robert M.; Lui, Chih-Hung  
CORPORATE SOURCE: School of Textiles, Heriot Watt University, Galashiels, TD1 3HF, \*\*\*UK\*\*\*  
SOURCE: Dyes and Pigments ( \*\*\*2000\*\*\* ), 47(1-2), 79-89  
CODEN: DYPIDX; ISSN: 0143-7208  
PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: \*\*\*English\*\*\*  
OTHER SOURCE(S): CASREACT 134:102208

AB A series of 3-(2-benzimidazolyl)coumarins contg. a variety of substituents in the benzene ring of the coumarin system was synthesized and the spectral properties were investigated. The results of PPP MO calcns., using previously optimized parameters, were found to provide a reasonable account of the electronic absorption spectra for this series of dyes, except for some compds. which are likely to be non-planar as a result of steric congestion. The absorption and emission properties of the dyes were discussed in terms of their electronic structures.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:766245 CAPLUS  
DOCUMENT NUMBER: 123:202012  
ORIGINAL REFERENCE NO.: 123:35993a,35996a  
TITLE: The influence of chain length and electron acceptor residues in 3-substituted 7-N,N-diethylaminocoumarin dyes  
AUTHOR(S): Griffiths, J.; Millar, V.; Bahra, G. S.  
CORPORATE SOURCE: Dep. Colour Chem., Univ. Leeds, Leeds, LS2 9JT, \*\*\*UK\*\*\*  
SOURCE: Dyes and Pigments ( \*\*\*1995\*\*\* ), 28(4), 327-39  
CODEN: DYPIDX; ISSN: 0143-7208  
PUBLISHER: Elsevier  
DOCUMENT TYPE: Journal  
LANGUAGE: \*\*\*English\*\*\*

AB Several 7-N,N-diethylaminocoumarin dyes with vinylogously extended electron acceptor groups in the 3-position have been prepd. by condensing the 3-aldehyde with various active methylene compds. Structures vary according to both the nature of the electron withdrawing moiety and the length of the conjugation pathway between the 7-amino group and the electron acceptor residue. Dyes with colors ranging from red to cyan have been prepd., and their light absorption properties are discussed in terms of the electron acceptor and the extent of conjugation. Steric factors



play a major role in influencing the color properties, and this was exemplified in one extreme case where lengthening the conjugation chain by one vinyl unit caused a hypsochromic shift due to increased steric interactions. In general, the vinylogous donor-acceptor coumarin dyes were not as fluorescent as the more conventional 7-dialkylaminocoumarins which have a shorter conjugation path between the amino group and the 3-acceptor group. Two cationic dyes have been prepd. by condensation of the coumarin aldehyde with enamines, and these show typical cyanine dye characteristics, with intense long wavelength absorption.

L15 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1979:123042 CAPLUS  
DOCUMENT NUMBER: 90:123042  
ORIGINAL REFERENCE NO.: 90:19501a,19504a  
TITLE: Styryl dyes for synthetic polymer fibers  
AUTHOR(S): Chun, Ping-Man; Peters, Arnold T.  
CORPORATE SOURCE: Sch. Colour Chem. Colour Technol., Univ. Bradford,  
Bradford/West Yorkshire, \*\*\*UK\*\*\*  
SOURCE: Journal of Applied Chemistry & Biotechnology ( \*\*\*1978\*\*\* ), 28(7), 463-8  
CODEN: JACBBD; ISSN: 0375-9210  
DOCUMENT TYPE: Journal  
LANGUAGE: \*\*\*English\*\*\*  
GI

/ Structure 1 in file .gra /

AB Thirty yellow to red styryl dyes (I and II) were prepd. by reaction of 4-NCCH<sub>2</sub>CH<sub>2</sub>NMeC<sub>6</sub>H<sub>4</sub>CHO [94-21-3] and 2,4-Me(PhCO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NET)C<sub>6</sub>H<sub>4</sub>CHO [57500-10-4] with various active methylene compds. (H<sub>2</sub>CRR1) in pyridine contg. piperidine, and their absorption spectra and dyeing properties on secondary acetate and polyester fibers were studied. For optimum dyeing properties, the presence of a CN group in H<sub>2</sub>CRR1 was essential. Max. coloration properties resulted from the presence of two CN groups or one CN group in conjunction with an ester, arylamide, 4-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>, or 2-benzimidazolyl residue. Dyes contg. two CN groups or a CN and an ester group had the highest lightfastness, but highest sublimation fastness was obtained when H<sub>2</sub>CRR1 was 2-(cyanomethyl)benzimidazole [ \*\*\*4414-88-4\*\*\* ]. Both coloration and lightfastness were poor when H<sub>2</sub>CRR1 contained only carbonyl functions.

L15 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1972:461884 CAPLUS  
DOCUMENT NUMBER: 77:61884  
ORIGINAL REFERENCE NO.: 77:10239a,10242a  
TITLE: Addition reaction of heterocyclic compounds. XLIX.  
Reactions of benzimidazoles possessing an activated 2-methylene group with acetylenic esters  
AUTHOR(S): Acheson, R. M.; Verlander, M. S.  
CORPORATE SOURCE: Dep. Biochem., Univ. Oxf., Oxford, \*\*\*UK\*\*\*  
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) ( \*\*\*1972\*\*\* ), (12), 1577-83  
CODEN: JCPRB4; ISSN: 0300-922X  
DOCUMENT TYPE: Journal

LANGUAGE:

\*\*\*English\*\*\*

GI For diagram(s), see printed CA Issue.

AB The reaction of benzimidazole-2-acetonitrile (I), Et benzimidazole-2-acetate, and their 1-Me derivs. with HC.tplbond.CCO2Me and MeO2CC.tplbond.CCO2Me in MeCN gave pyrido- and azepino[1,2-a]benzimidazoles; e.g. I with MeO2CC.tplbond.CCO2Me gave 4.9% Me 4-cyano-3,5-dihydro-3-oxopyrido[1,2-a]benzimidazole-1-carboxylate (II), 4% tetra-Me 6-cyano-9,10-dihydro-5H-azepino[1,2-a]benzimidazole-7,8,9,10-tetracarboxylate (III), and 5% hexa-Me 4-cyano-1,2,3,3a-tetrahydrodipyrrolo[1,2-a:1',2'-c]quinoxaline-1,2,3,3a,5,6-hexacarboxylate (IV).

4414-88-4/rn

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2008 ACS on STN  
RN \*\*\*4414-88-4\*\*\* REGISTRY  
ED Entered STN: 16 Nov 1984  
CN 1H-Benzimidazole-2-acetonitrile (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 2-Benzimidazoleacetonitrile (6CI, 7CI, 8CI)  
OTHER NAMES:  
CN (1H-Benzimidazol-2-yl)acetonitrile  
CN (2-Benzimidazolyl)acetonitrile  
CN 1-H-Benzoimidazol-2-yl-acetonitrile  
CN 2-(Cyanomethyl)benzimidazole  
CN 2-(Cyanomethyl)benzoimidazole  
CN 2-Benzimidazolacetonitrile  
CN 2-Cyanomethylbenz[d]imidazole  
CN NSC 525203  
DR 77772-12-4  
MF C9 H7 N3  
CI COM  
LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,  
CHEMINFORMRX, CHEMLIST, CSCHEM, GMELIN\*, IFICDB, IFIPAT, IFIUDB, RTECS\*,  
SPECINFO, TOXCENTER, ULIDAT, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)  
DT.CA CAplus document type: Journal; Patent  
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT  
(Reactant or reagent); USES (Uses); NORL (No role in record)  
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological  
study); USES (Uses)  
RL.NP Roles from non-patents: BIOL (Biological study); CMBI (Combinatorial  
study); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
(Reactant or reagent); USES (Uses); NORL (No role in record)  
RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological  
study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

#### Ring System Data

Elemental Analysis	Elemental Sequence	Size of the Rings	Ring System Formula	Ring Identifier	RID Occurrence
EA	ES	SZ	RF	RID	Count
=====	=====	=====	=====	=====	=====
C3N2-C6	NCNC2-C6	5-6	C7N2	333.401.37	1

/ Structure 1 in file .gra /

#### Experimental Properties (EPROP)

PROPERTY (CODE)	VALUE	NOTE
=====	=====	=====
Mass Spectra	Spectrum	(1) WSS

Melting Point (MP)|206-209 deg C|(2) CAS  
Proton NMR Spectra|Spectrum|(1) WSS

- (1) Spectral data were obtained from Wiley Subscription Services, Inc. (US)  
(2) Bell, Malcolm R.; BE 659467 1965 CAPLUS

Mass Spectra  
/ BINARY DATA / 4414a001.JPG  
Spectrum ID: MSOC2006\_13\_40749  
Number Of Peaks: 70  
Nominal Mass: 157  
Source: Spectral data were obtained from Wiley Subscription  
Services, Inc. (US)

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Proton NMR Spectra  
/ BINARY DATA / 4414a002.JPG  
Spectrum ID: NMR\_12252464\_cbi\_49745  
Solvent: dimethyl sulfoxide-d6 (2206-27-1)  
Working Frequency: 500 MHz  
Source: Spectral data were obtained from Wiley Subscription  
Services, Inc. (US)

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Experimental Property Tags (ETAG)

PROPERTY | NOTE  
=====+=====

IR Absorption Spectra|(1) CAS

- (1) Ivanova, Bojidarka B.; Journal of Molecular Structure 2006 V797(1-3)  
P144-153 CAPLUS

Predicted Properties (PPROP)

PROPERTY (CODE)	VALUE	CONDITION	NOTE
Bioconc. Factor (BCF)	1.0	pH 1 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 2 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 3 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 4 25 deg C	(1)
Bioconc. Factor (BCF)	1.59	pH 5 25 deg C	(1)
Bioconc. Factor (BCF)	2.80	pH 6 25 deg C	(1)
Bioconc. Factor (BCF)	3.03	pH 7 25 deg C	(1)
Bioconc. Factor (BCF)	3.05	pH 8 25 deg C	(1)
Bioconc. Factor (BCF)	3.03	pH 9 25 deg C	(1)
Bioconc. Factor (BCF)	2.85	pH 10 25 deg C	(1)
Boiling Point (BP)	439.5+/-28.0 deg C	760 Torr	(1)
Density (DEN)	1.295+/-0.06 g/cm**3	20 deg C	(1)
		760 Torr	
Enthalpy of Vap. (HVP)	69.64+/-3.0 kJ/mol	760 Torr	(1)
Flash Point (FP)	142.5+/-9.2 deg C		(1)
Freely Rotatable Bonds (FRB)	1		(1)
H acceptors (HAC)	3		(1)
H donors (HD)	1		(1)

Hydrogen Donors/Acceptors Sum	4		(1)
(HDAS)			
Koc (KOC)	1.0	pH 1 25 deg C	(1)
Koc (KOC)	1.0	pH 2 25 deg C	(1)
Koc (KOC)	1.07	pH 3 25 deg C	(1)
Koc (KOC)	7.80	pH 4 25 deg C	(1)
Koc (KOC)	40.38	pH 5 25 deg C	(1)
Koc (KOC)	70.83	pH 6 25 deg C	(1)
Koc (KOC)	76.62	pH 7 25 deg C	(1)
Koc (KOC)	77.20	pH 8 25 deg C	(1)
Koc (KOC)	76.77	pH 9 25 deg C	(1)
Koc (KOC)	72.15	pH 10 25 deg C	(1)
logD (LOGD)	-1.54	pH 1 25 deg C	(1)
logD (LOGD)	-1.43	pH 2 25 deg C	(1)
logD (LOGD)	-0.92	pH 3 25 deg C	(1)
logD (LOGD)	-0.06	pH 4 25 deg C	(1)
logD (LOGD)	0.66	pH 5 25 deg C	(1)
logD (LOGD)	0.90	pH 6 25 deg C	(1)
logD (LOGD)	0.94	pH 7 25 deg C	(1)
logD (LOGD)	0.94	pH 8 25 deg C	(1)
logD (LOGD)	0.94	pH 9 25 deg C	(1)
logD (LOGD)	0.91	pH 10 25 deg C	(1)
logP (LOGP)	0.941+/-0.293	25 deg C	(1)
Mass Intrinsic Solubility	0.31 g/L	25 deg C	(1)
(ISLB.MASS)			
Mass Solubility (SLB.MASS)	97 g/L	pH 1 25 deg C	(1)
Mass Solubility (SLB.MASS)	75 g/L	pH 2 25 deg C	(1)
Mass Solubility (SLB.MASS)	24 g/L	pH 3 25 deg C	(1)
Mass Solubility (SLB.MASS)	3.1 g/L	pH 4 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.61 g/L	pH 5 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.35 g/L	pH 6 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.33 g/L	pH 7 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.31 g/L	pH 8 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.33 g/L	pH 9 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.35 g/L	pH 10 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.31 g/L	Unbuffered Water	(1)
		pH 7.94	
		25 deg C	
Molar Intrinsic Solubility	0.0020 mol/L	25 deg C	(1)
(ISLB.MOL)			
Molar Solubility (SLB.MOL)	0.62 mol/L	pH 1 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.48 mol/L	pH 2 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.15 mol/L	pH 3 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.020 mol/L	pH 4 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.0039 mol/L	pH 5 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.0022 mol/L	pH 6 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.0021 mol/L	pH 7 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.0020 mol/L	pH 8 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.0021 mol/L	pH 9 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.0022 mol/L	pH 10 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.0020 mol/L	Unbuffered Water	(1)
		pH 7.94	
		25 deg C	
Molar Volume (MVOL)	121.2+/-3.0 cm**3/mol	20 deg C	(1)
		760 Torr	
Molecular Weight (MW)	157.17		(1)
pKa (PKA)	11.14+/-0.69	Most Acidic	(1)

pKa (PKA)	4.66+/-0.12	25 deg C Most Basic	(1)
Polar Surface Area (PSA)	52.47 A**2	25 deg C	(1)
Vapor Pressure (VP)	6.36E-08 Torr	25 deg C	(1)

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.14  
((C) 1994-2008 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

414 REFERENCES IN FILE CA (1907 TO DATE)

5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

420 REFERENCES IN FILE CAPLUS (1907 TO DATE)

6 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

#### REFERENCE 1

ACCESSION NUMBER: 149:555122 CA  
 TITLE: Addition and substitution reactions of nitrile-stabilized carbanions  
 AUTHOR(S): Arseniyadis, Simeon; Kyler, Keith S.; Watt, David S.  
 CORPORATE SOURCE: Univ. Wyoming, Laramie, WY, USA  
 SOURCE: Organic Reactions (Hoboken, NJ, United States) (1984), 31, No pp. given  
 CODEN: ORHNBA  
 URL: <http://www3.interscience.wiley.com/cgi-bin/mrwhome/107610747/HOME>  
 PUBLISHER: John Wiley & Sons, Inc.  
 DOCUMENT TYPE: Journal; General Review; (online computer file)  
 LANGUAGE: English  
 CLASSIFICATION: 21-0 (General Organic Chemistry)  
 ABSTRACT:  
 A review of the article Addn. and substitution reactions of nitrile-stabilized carbanions.

SUPPL. TERM: review Carbanions; review Reactions; review Nitrile Stabilized; review Addn; review Substitution  
 INDEX TERM: Organic synthesis  
 (Addn. and Substitution Reactions of Nitrile-Stabilized Carbanions)  
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